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Description

The present invention relates to the joining of panels, and is particularly concerned with a system for forming butt joints between coplanar building panels such as plasterboard ceiling panels.

Currently, when constructing a ceiling from plasterboard sheets, regulations require the edges of all sheets to be supported by fixing to joists or to noggins running between the joists. Clearly, the cutting to length of the noggins and their fixing between joists is a time consuming operation and increases building costs.

US Patent 1,879,457 describes a mounting strip for panels, having a mounting flange and a series of projections upstanding from the centreline of the flange, the projections each having a barb extending to one side of the centreline. The barbs may extend in both directions from the centreline, or may all extend to the same side of the centreline. The barbs engage the panel edges by being hammer driven thereinto, prior to the installation of the adjacent panel, which is driven on to the exposed barbs. Clearly, this process may risk breakage of thin fragile panels due to the necessary application of compressive forces in the plane of the panels across their width.

US Patent 3,171,232 describes a retaining strip for cladding panels having a fixing flange and a single upstanding web formed on both faces with barbs to engage the edges of the cladding panels. Again, the barbs remain stationary in use and the panels must be driven on to them.

In US 2,005,030, there is described a mounting strip formed with pairs of gripping fingers which engage in slots cut in opposite side edges of respective ones of a plurality of elongate panels extending across the strip. The panels are arranged to cross at least two strips, and thus the panel edges are engaged at only a plurality of discreet points by the strips.

French Patent 2,176,756 describes a system of joining panels wherein a mounting strip receives a plurality of clips which are rotatable to engage in preformed slots in adjacent panel edges. The need for specially prepared accurately slotted panels is a disadvantage, in that the slots weaken the panel edges and also increase costs.

French Patent 2,093,099 describes a method of fixing a false ceiling, wherein ceiling panels are formed with an undercut rebate around their edges, the rebate being engaged by resilient strips fixed to the ceiling to be covered. The security of the fixing depends entirely on the accuracy of the installation of the strips, since only their resilience urges them into engagement with the panels.

The present invention seeks to provide a jointing method for plasterboard panels which ensures support and alignment between adjacent edges of abutting panels without the use of noggins.

According to the present invention, a panel jointing system comprises an alignment and securing strip adapted to align the panel edges to be jointed, the strip having engaging means capable of retaining the panel edges in position, and characterised by including a pair of spaced parallel locating surfaces extending longitudinally of the strip and adapted to engage the edges of the panels to preserve a predetermined spacing therebetween, a pair of flexible walls extending substantially parallel to the locating surfaces, and a plurality of expansion elements the walls carrying outwardly facing barbs capable of gripping the panel edges by penetrating into the panel arterial through the edges of the respective panels when the flexible walls are deflected away from one another by the expansion elements.

In a first embodiment of the invention, an alignment and securing strip includes a pair of spaced parallel locating surfaces adapted to engage the edges of the panels to preserve a predetermined spacing therebetween, and a pair of flexible walls extending substantially parallel to the abutment surfaces, the walls carrying outwardly facing barbs capable of gripping the panel edges when the flexible walls are deflected away from one another.

A panel jointing system according to the first embodiment of the invention may comprise an alignment and securing strip and a plurality of separate expansion elements capable of being positioned between the flexible walls to urge them apart. The expansion elements may be provided with cam surfaces and may be introduced between the flexible walls and then rotated so that the cam surfaces engage the flexible walls and urge them apart.

The expansion elements may be elongated, and may be introduced by aligning them with the joint direction, inserting them in a direction along an insertion axis at right angles to the joint direction, and finally rotating them about the insertion axis so that the ends of the alignment elements engage the flexible channel walls.

Advantageously, resilient latch means may be provided to secure the alignment elements in place.

As an alternative to cam surfaces, the expansion elements may each comprise a wedge type element which is inserted between the flexible walls to urge them apart. The wedge element may be conical and may include a threaded stem extending axially from its apex, the stem being received in an opening in a web extending between the flexible walls, so that rotation of the wedge element draws the conical part thereof axially between the flexible walls to urge them apart.

In any of the above described constructions, the flexible walls may be non-resilient so that once urged apart the barbs engage the panel edges and remain embedded therein even if the expansion element is removed. In such constructions, the expansion ele-

ment may be an expansion tool engageable between the flexible walls to force them apart locally, the tool being released from between the flexed walls to be re-applied at spaced locations along the alignment and securing strip.

In yet a further alternative embodiment, the alignment and securing strip comprises a planar strip from which a pair of spaced flexible webs extend, the strip extending laterally beyond the webs to form two alignment flanges, and the area of the strip between the webs being slit to define a plurality of swingable expanding portions. The webs converge slightly towards their free edges, and are formed at their free edges with outwardly-facing longitudinal barbs. By swinging the expansion portions out of the plane of the strip to a position between the webs, the webs are urged outwardly to engage the barbs into the edges of the panels while the alignment flanges engage the edge regions of the panel faces. The expansion portions are preferably rectangular and have their outlines defined by three slits arranged in 'C' formation, with the remaining side of the rectangle acting as a plastic hinge. An opening may be formed in the strip adjacent to the expansion portion to facilitate the swinging of the expansion portion out of the plane of the strip.

The alignment strip may be fixed to a first one of the panels by adhesives, or by fasteners such as nails or the like.

The invention will now be described in detail with reference to the accompanying drawings, in which:

Figure 1 is an end view of a joint using the jointing system of the first embodiment of the invention,

Figure 2 is an end view of the alignment and securing strip of Figure 1, to an enlarged scale,

Figures 3 and 4 are plan and side views, respectively of an expansion element drawn to the same scale as Figure 2,

Figures 5A to 5C show the stages in completing the alignment and fixing of panels to be joined using the system of Figures 1 to 4,

Figure 6 is an end view of a second joint system,

Figure 7 is a partially cutaway perspective view of a part of an alignment and securing strip according to a third embodiment of the invention, and

Figure 8 is a view similar to Figure 6 showing the flexible webs of the alignment strip in their laterally expanded position.

Referring now to Figures 1 and 2, the alignment strip shown comprises a pair of coplanar flanges 1 and two outwardly facing abutment surfaces 2 joined by a web 3 to form an inverted "top hat" section.

Extending downwardly from the web 3 are two flexible walls 4 and 5, at whose free ends are formed outwardly extending flanges 6 and inwardly extending flanges 7. The flexible walls 4 and 5 are perforated by holes 8, the holes being aligned to accept fasteners for temporarily fixing the strip in place.

Figures 3 and 4 show an expansion element for use with the strip of Figure 2. The expansion element is generally trapezoidal in side view, and has an upper surface 9 and a lower surface 10 parallel thereto.

Trapezoidal side faces 11 and 12 extend between the upper and lower surfaces 9 and 10, and curved and inclined end cam faces 13 and 14 complete the expansion element. A non-circular recess 15, such as a slot for a screwdriver or a hexagonal recess to accept an Allen key, is formed centrally in the lower surface 10.

It will be observed from the figures that the expansion element is so dimensioned as to be insertable between the flanges 7 when offered up with its upper surface 9 parallel to the web 3 and its longest dimension aligned with the joint direction.

In use, two panels are butt jointed using the system of the present invention in the following way:

First, one panel A has the alignment strip secured to it by means of fasteners 16 extending through the openings 8 and entering the panel edge as seen in Figure 5A. Alternatively or additionally, an adhesive bond between the panel A and the flange 1 and/or the abutment surface 2 may be made.

The panel A is then offered up and fixed in position, for example by nailing through the panel into supporting timbers.

Panel B is then offered up and secured in position, with its edge abutting the other abutment surface 2 of the alignment strip. It will be observed from Figure 5B that in this position the flexible walls 4 and 5 are parallel, and the outer edges of the flanges 6 are in contact with the edges of the panels A and B.

An alignment element is then inserted between the walls 4 and 5, so that the upper surface 9 contacts the web 3. A screwdriver or other tool (not shown) inserted into the recess 15 in the exposed underside 10 of the expansion element is then turned through approximately 90°, causing the expansion element to rotate.

This rotation brings the cam surfaces 13 and 14 into contact with the flexible walls 4 and 5, deflecting them outwardly, an seen in Figure 5C. This causes the flanges 6 to become embedded in their respective adjacent panel edges, with a slight upward rotation which urges the panels into close contact with their respective flanges 1. This ensures correct alignment between the panels A and B.

The joint is then completed by filling the space between the panel edges with a plaster, it being noted that the flanges 7 extending inwardly from the ends of the flexible walls 4 and 5 serve not only to retain the expansion elements against ejection, but also as a "key" to retain the plaster. Flexible walls 4 and 5 may be perforated at intervals to allow the plaster to flow through the perforations and aid retention.

Resilient latching configurations may be used to retain the expanding element in its rotated position,

such latching configurations comprising detents formed on the flexible walls 4 and 5 or on the flanges 7 to engage ratchet teeth on the expansion element to resist undesired rotation of the expansion element.

As an alternative to the flanges embedding themselves in the panel edge, the flexible walls 4 and 5 may be so dimensioned that the flanges 6 engage the face of the panel when the expansion elements are in place. While this will not give a flush joint when plaster is laid between the panels, it may be useful in certain applications where a flush finish is not necessary. An arrangement where the panels are gripped between flanges 6 and 1 may for example be of use in demountable displays for use at exhibitions.

As an alternative to the use of expansion elements such as are shown in Figures 1 to 5, the alignment and securing strip may be formed for example from metal such as aluminium so that the flexible walls will remain in their outwardly deflected position when the expanding force is removed. In this way it is possible to contemplate the use of an expanding tool in place of the expanding elements, the expanding tool being inserted sequentially at a plurality of locations along the strip to deflect the flexible walls outwardly to engage the panels.

Referring now to Figure 6, an alternative embodiment of the invention is shown wherein an alignment strip is provided with flexible walls 15 and 16 equipped at their free ends with outwardly extending barbs 17 and inwardly directed flanges 18. A web 19 between the flexible walls 15 and 16 is thickened and perforated to accept a threaded shank 20 of an expansion element 21. The expansion element 21 further includes a conical expanding head 22, slotted at 23 to accept a screwdriver.

In use, the alignment strip of Figure 6 is installed exactly as described in relation to the strip of Figures 1 to 5, but the final fixing of the panels is achieved by engaging the shank 20 of an expanding element 22 into one of the perforations in web 19, and rotating the expansion element so that its thread draws the expansion element upwardly. As will be apparent, the end faces of the flanges 18 will contact the conical surface of the expanding head 22, and as the expansion element moves upwardly the flexible walls will be forced apart, embedding the barbs 17 into the panel edges. It is possible, by appropriate design of the alignment strip, to allow conventional countersunk screws to be used as expansion elements.

In a third embodiment of the invention, shown in Figures 7 and 8, the alignment and securing strip and the expansion elements are parts of an integrally formed component. This is achieved by extruding and perforating a strip of plastics or metal, as will be described.

Figure 7 shows an alignment strip having an elongate planar base 100. Upstanding from the central part of the base 100 are a pair of longitudinally extending spaced walls 104 and 105. It is clear from the view of Figure 7 that the walls are inclined rather than perpendicular to the base, so that the facing surfaces 104a and 105a converge towards their free edges 104b and 105b.

At their free edges, the walls 104 and 105 are formed with outwardly facing projections 106 having a sharp longitudinal edge. The walls 104 and 105 may also be perforated, as at 107, to reduce arterial cost and to provide a plaster key.

In the region of the base 100 between the walls, rectangular expansion portions 109 are defined at intervals along the base 100 by sets of three slits 109a, 109b, 109c, arranged in a 'C' formation, the fourth side of the rectangle being a bend line B - B. Adjacent the expansion portion 109, on its side opposite the bend line B - B, an opening 110 is formed in the base 100.

The transverse dimension of the expansion portion is arranged, by virtue of the inward inclination of the walls 104 and 105, to be greater than the clearance between the upper edges 104b and 105b when unstressed. The longitudinal dimension of the expansion portion is so arranged that, when bent up at 90° to the plane of the base about bend line B - B, the expansion portion has a height substantially equal to the height of the walls 104, 105.

In use, the alignment and securing strip is initially installed by fixing it to a panel edge so that the base 100 contacts the rear face of the panel and the panel edge engages the longitudinal edge of one of the projections 106. A supplementary locating surface, such as the step 111, may be provided adjacent the foot of the walls 104 and 105, to ensure accurate location.

With the first panel and the strip fixed in position, a second panel is offered up and fixed in position with its edge contacting the remaining projection 106 (and the step 111 if provided).

A suitable tool may then be inserted through the opening 110 and manipulated to lever the expansion portion 109 out of the plane of the base 100, by bending the base material along bend line B - B.

During the lifting of the expansion portion 109, the edges of the expansion portion engage the facing surfaces of the walls 104 and 105 and urge them apart, causing the projections 106 to become embedded in the arterial of the panels. Clearly, if the walls 104 and 105 are perforated, then unperforated sections must be left adjacent to the expanding portions 109, so that a sliding cam action may occur between the walls and the lateral edges of the expansion portion. Figure 8 shows an expansion portion 109 in its raised position, the walls 104 and 105 being locally forced apart.

The strip shown in Figures 7 and 8 clearly has advantages over the previous embodiments, principally in that there are no small loose components which may become mislaid, and in that the pitch between ex-

pansion portions 109 is predetermined, leaving a user in no doubt as to the spacing required between the expansion elements. The opening 100 may be configured to accept a common screwdriver, or a special tool may be used to extend through the opening 110, and engage and lift the expansion portion 109.

Claims

1. A panel jointing system comprising an alignment and securing strip (1, 2, 3, 100, 19) adapted to align the panel edges to be jointed, the strip having engaging means (6, 106, 17) capable of retaining the panel edges in position, and characterised by including a pair of spaced parallel locating surfaces (2, 111) extending longitudinally of the strip and adapted to engage the edges of the panels to preserve a predetermined spacing therebetween, a pair of flexible walls (4, 5, 104, 105, 15, 16) extending substantially parallel to the locating surfaces, and a plurality of expansion elements (9, 21, 109), the walls carrying outwardly facing barbs (6, 106, 17) capable of gripping the panel edges by penetrating into the panel arterial through the edges of the respective panels when the flexible walls (4, 5, 104, 105, 15, 16) are deflected away from one another by the expansion elements (9, 21, 109).

2. A system according to Claim 1, characterised in that expansion elements (9) are elongate and are introduced between the flexible walls of the strip with their longitudinal axes parallel to that of the strip, the expansion elements being rotatable so that their longitudinal axes lie transversely to the strip, the ends (13, 14) of the expansion elements engaging inner faces of the flexible walls (4, 5) to urge the flexible walls apart during rotation of the expansion elements.

3. A system according to Claim 2, characterised by further including means (7) to retain the expansion elements (9) in their rotated position between the flexible walls (4, 5).

4. A system according to Claim 1, characterised in that the expansion elements are a number of wedge elements (21).

5. A system according to Claim 1, characterised in that the wedge elements (21) have a conical head (22) and have a threaded shank (20) extending axially from the apex of the cone, the shank being threadedly engageable in an opening in the strip between the flexible walls (15, 16) so that rotation of the wedge element (21) draws the conical head (22) into the space between the walls (15, 16), deflecting them outwards.

6. A system according to Claim 1, characterised in that the strip (100) has flexible walls (104, 105) whose facing surfaces (104a, 105a) are convergent towards their free edges (104b, 105b), and the strip is formed between the walls with a number of expanding portions (109) which, when bent out of the plane of the strip (100), engage the facing surfaces (104a, 105a) of the walls (104, 105) to urge them apart.

7. A system according to Claim 6, characterised in that the expanding portions (109) are rectangular and are defined on one side by a bend line (B - B) and on the remaining three sides by slits (109a, 109b, 109c).

8. A system according to Claim 7, characterised in that an opening (110) is formed in the strip (100) adjacent to that side (109b) of each expanding portion (109) which is opposite the bend line (B - B).

9. A system according to Claim 1, characterised in that the flexible walls (104, 105) are formed with keying formations (107) to assist in the adhesion of plaster to the strip.

10. A system according to Claim 9, characterised in that the keying formations are perforations (107).

11. A method of jointing two coplanar panels, comprising the steps of placing a first panel edge (A) in registry with a first locating surface (2, 111) of an alignment and locating strip (1, 2, 3, 100, 19) according to any preceding claim, positioning a second panel edge (B) in registry with a second locating surface (2, 111) of the strip (1, 2, 3, 100, 19) and operating engagement means (6, 106, 17) associated with the strip to fix the panel edges in position, characterised in that the engagement means comprises a pair of flexible walls extending in parallel to the respective locating surfaces, the walls having outwardly facing barbs (6, 106, 17) which penetrate the material of the panels through the panel edge surfaces.

Patentansprüche

1. Regal-Montagesystem, das eine Ausrichte- und Befestigungsschiene (1, 2, 3, 100, 19) enthält, mit der die Kanten der zu verbindenden Regalelemente auszurichten sind, wobei die Schiene Betätigungsmittel (6, 106, 17) aufweist, mit denen die Regalflächen in bestimmter Position gehalten werden, gekennzeichnet durch

- ein Paar parallel zueinander angeordneten Befestigungsflächen (2, 111), die mittig über die Schiene hinausragen und zur Befestigung der Flächen des Regals und zur Einhaltung eines bestimmten Abstandes zwischen diesen dienen
- ein Paar flexibler Wände (4, 5, 104, 105, 15, 16), die parallel zueinander wesentlich über die Befestigungsflächen (2, 111) hinausragen und
- eine Vielzahl von Ausdehnungselementen (9, 21, 109),

wobei die flexiblen Wände senkrecht auf denselben Anschlagkanten oder -schneiden (6, 106, 17) tragen, welche dazu bestimmt sind, die Regalbretter dadurch zu fixieren, daß die Kanten oder Schneiden in das Material der Regalbretter an den jeweiligen Kanten der Bretter eingetrieben werden, wenn die flexiblen Wände (4, 5, 104, 105, 15, 16) durch die Ausdehnungselemente (9, 21, 109) voneinander weggebogen werden.

2. Anordnung nach Anspruch 1, dadurch gekennzeichnet, daß die Ausdehnungselemente (9) eine langgestreckte Form aufweisen und zwischen die flexiblen Wände der Schiene eingeführt werden, wobei ihre Längsachse parallel zu der der Schiene verläuft, daß die Ausdehnungselemente drehbar sind, so daß ihre Längsachsen quer zu der der Schiene liegen und die Enden (13, 14) der Ausdehnungselemente an den inneren Flächen der flexiblen Wände (4, 5) anliegen und diese nach außen drücken, wenn sie gedreht werden.

3. Anordnung nach Anspruch 2, gekennzeichnet durch weitere Festhaltekanten (7) zum Halten der Ausdehnungselemente (9) in ihrer verdrehten Lage zwischen den flexiblen Wänden (4, 5).

4. Anordnung nach Anspruch 1, dadurch gekennzeichnet, daß die Ausdehnungselemente ein Teil der Verschraubelemente (21) sind.

5. Anordnung nach Anspruch 1, dadurch gekennzeichnet, daß die Verschraubelemente (21) einen konischen Kopf (22) und einen Schaft (20) mit Schraubgewinde besitzen, welcher axial gegenüber von der Spitze von dem Konus ausgeht, daß der Schaft schraubend in eine Öffnung in der Schiene zwischen den flexiblen Wänden (15, 16) eingebracht werden kann, so daß bei Rotation des Verschraubelements (21) der konische Kopf (22) in den Zwischenraum zwischen die flexiblen Wände (15, 16) gezogen wird und diese nach außen drückt.

6. Anordnung nach Anspruch 1, dadurch gekennzeichnet, daß die Schiene (100) flexible Wände (104, 105) besitzt, deren Oberflächen (104a, 105a) in Richtung auf ihre freien Kanten (104b, 105b) zusammenlaufen und daß die Schiene zwischen den Wänden mit einer Anzahl von Ausdehnungsteilen (109) versehen ist, welche, wenn sie aus der Ebene der Schiene (100) herausgebogen werden, die Oberflächen (104a, 105a) der Wände (104, 105) kontaktieren und diese jeweils nach außen drücken.

7. Anordnung nach Anspruch 6, dadurch gekennzeichnet, daß die Ausdehnungsteile (109) rechtwinklig sind und an einer Seite eine Biegekante (B-B) besitzen und an den übrigen drei Seiten Schlitze (109a, 109b, 109c) bilden.

8. Anordnung nach Anspruch 7, dadurch gekennzeichnet, daß eine Öffnung (110) in der Schiene (100) unmittelbar angrenzend an die Seite (109b) von jedem Ausdehnungsteil (109) eingebracht ist, die der Biegelinie (B-B) gegenüberliegt.

9. Anordnung nach Anspruch 1, dadurch gekennzeichnet, daß die flexiblen Wände (104, 105) mit Kontaktbereichen (107) versehen sind, um die Anfügung der jeweiligen Oberflächen an die Schiene zu unterstützen.

10. Anordnung nach Anspruch 9, dadurch gekennzeichnet, daß die Kontaktbereiche Durchbrüche (107) sind.

11. Verfahren zur Verbindung zweier in einer Ebene liegenden Regalflächen, bei dem zunächst ein erstes Regalbrett (A) an einer ersten Bezugsoberfläche (2, 111) einer Ausrichte- und Befestigungsschiene (1, 2, 3, 100, 19) gemäß einigen der vorstehenden Ansprüche zur Anlage gebracht wird, sodann ein zweites Regalbrett an einer zweiten Bezugsoberfläche (2, 111) der Schiene (1, 2, 3, 100, 19) positioniert wird und sodann Befestigungmittel (6, 106, 17) betätigt werden, die zum Zwecke der Fixierung der Regalflächen an der Schiene angebracht sind, dadurch gekennzeichnet, daß die Befestigungmittel aus einem Paar flexibler Wände bestehen, die parallel zueinander und zu den betreffenden zu fixierenden Kanten verlaufen, wobei die flexiblen Wände auswärts Fixierkanten oder-schneiden (6, 106, 17) aufweisen, welche in das Material der Flächen an deren Seitenkanten eindringen.

Revendications

1. Système de jointoiement de panneaux comportant une bande d'alignement et de fixation (1, 2, 3, 100, 19) apte à aligner les bords de panneaux

à jointoyer, la bande possédant des moyens de retenue (6, 106, 17) aptes à retenir les bords de panneaux en position, et caractérisé en ce qu'il comprend une paire de surfaces de positionnement parallèles espacées (2, 111) s'étendant longitudinalement à la bande et aptes à retenir les bords des panneaux pour maintenir un espacement prédéterminé entre eux, une paire de parois flexibles (4, 5, 104, 105, 15, 16) s'étendant sensiblement parallèlement aux surfaces de positionnement, et une pluralité d'éléments d'expansion (9, 21, 109), les parois portant des barbes tournées vers l'extérieur (6, 106, 17) aptes à saisir les bords de panneaux en pénétrant dans le matériau des panneaux à travers les bords des panneaux respectifs lorsque des parois flexibles (4, 5, 104, 105, 15, 16) sont écartées l'une de l'autre par les éléments de dilatation (9, 21, 109).

2. Système selon la revendication 1, caractérisé en ce que les éléments d'expansion (9) sont allongés et sont introduits entre les parois flexibles de la bande avec leurs axes longitudinaux parallèles à celui de la bande, les éléments d' expansion pouvant tourner de sorte que leurs axes longitudinaux se trouvent transversalement à la bande, les extrémités (13, 14) des éléments de dilatation venant en contact des surfaces intérieures des parois flexibles (4, 5) pour écarter les parois flexibles durant une rotation des éléments d'expansion

3. Système selon la revendication 2, caractérisé en ce qu'il comprend en outre des moyens (7) pour retenir les éléments d'expansion (9) dans leur position tournée entre les parois flexibles (4, 5).

4. Système selon la revendication 1, caractérisé en ce que les éléments d'expansion sont une pluralité d'éléments en coin (21).

5. Système selon la revendication 1, caractérisé en ce que les éléments en coin (21) possèdent une tête conique (22) et possèdent une tige filetée (20) s'étendant axialement depuis le sommet du cône, la tige pouvant être introduite par vissage dans une ouverture de la bande entre les parois flexibles (15, 16) de sorte qu'une rotation de l'élément en coin (21) attire la tête conique (22) dans l'espace entre les parois (15, 16), les déviant vers l'extérieur.

6. Système selon la revendication 1, caractérisé en ce que la bande (100) possède des parois flexibles (104, 105) dont les surfaces en regard (104a, 105a) convergent vers leurs bords libres (104b, 105b), et la bande est formée entre les parois avec une pluralité de parties d'expansion (109) qui, lorsqu'elles sont courbées hors du plan de la bande (100), viennent en contact des surfaces en regard (104a, 105a) des parois (104, 105) pour les écarter l'une de l'autre.

7. Système selon la revendication 6, caractérisé en ce que les parties d'expansion (109) sont rectangulaires et sont délimitées sur un côté par une ligne de flexion (B-B) et sur les trois autres côtés par des fentes (109a, 109b, 109c).

8. Système selon la revendication 7, caractérisé en ce qu'une ouverture (110) est pratiquée dans la bande (100) adjacente au côté (109b) de chaque partie d'expansion (109) qui est opposé à la ligne de flexion (B-B).

9. Système selon la revendication 1, caractérisé en ce que les parois flexibles (104, 105) sont réalisées avec des évidements (107) pour favoriser l'adhérence du plâtre à la bande.

10. Système selon la revendication 9, caractérisé en ce que les évidements sont des perforations (107).

11. Procédé de jointoiement de deux panneaux coplanaires, comportant les étapes consistant à placer un premier bord de panneau (A) en alignement avec une première surface de positionnement (2, 111) d'une bande d'alignement et de positionnement (1, 2, 3, 100, 19) selon l'une quelconque des revendications précédentes, le positionnement d'un second bord de panneau (B) en alignement avec une seconde surface de positionnement (2, 111) de la bande (1, 2, 3, 100, 19) et l'actionnement de moyens d'engagement (6, 106, 17) associés à la bande pour fixer les bords de panneaux en position, caractérisé en ce que les moyens d'engagement comportent une paire de parois flexibles s'étendant parallèlement aux surfaces de positionnement respectives, les parois possédant des barbes tournées vers l'extérieur (6, 106, 17) qui pénètrent dans le matériau des panneaux à travers les surfaces de bord des panneaux.

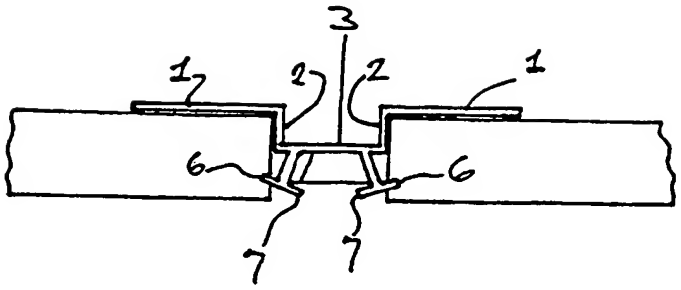


FIG 1

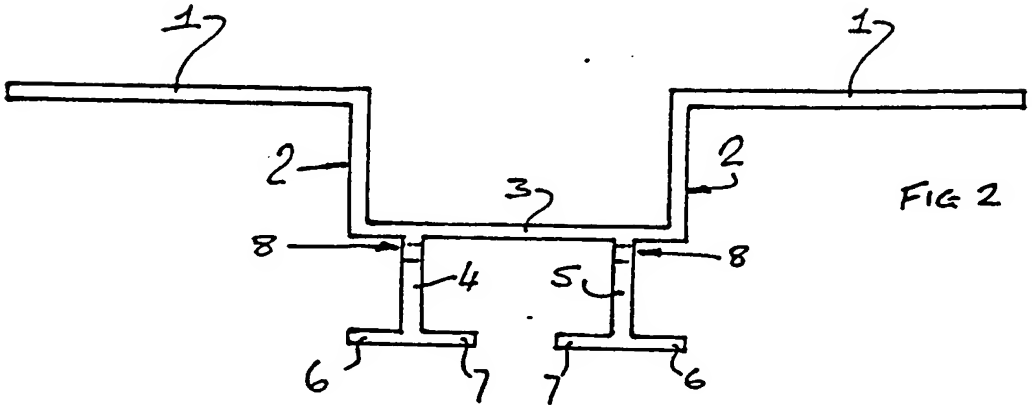


FIG 2

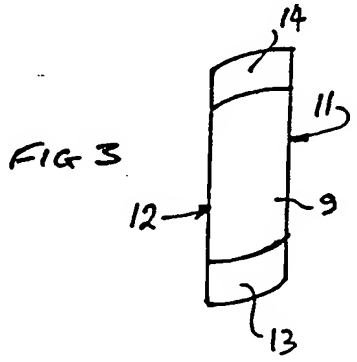


FIG 3

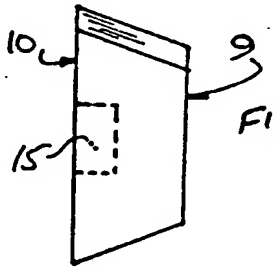


FIG 4

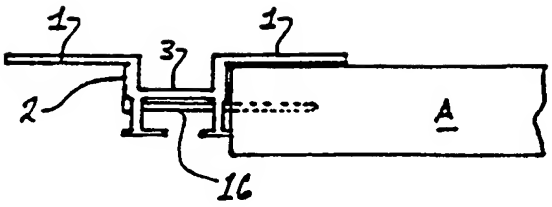


FIG 5A

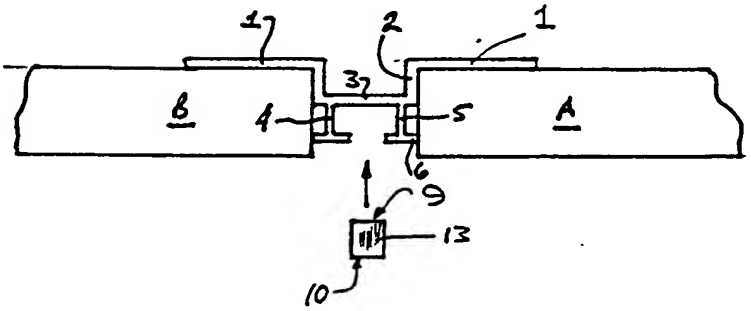


FIG 5B

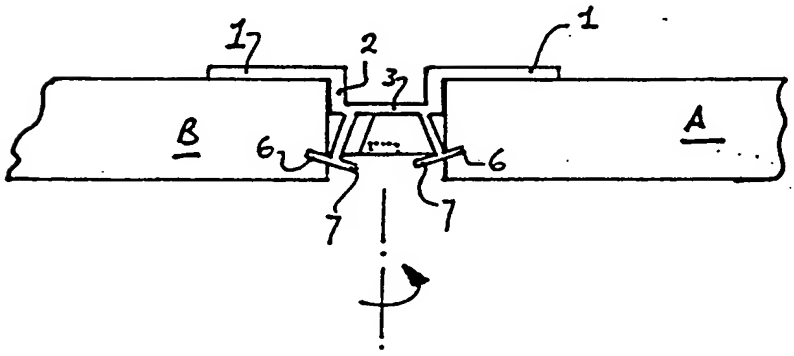


FIG 5C

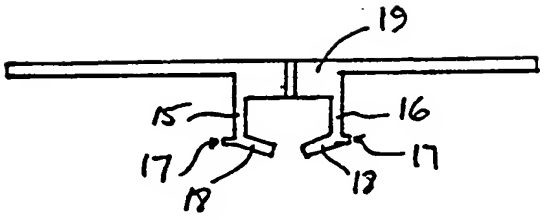
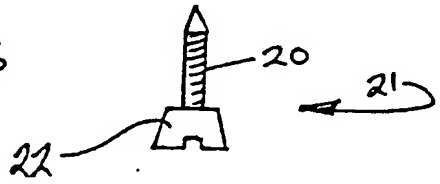


FIG 6



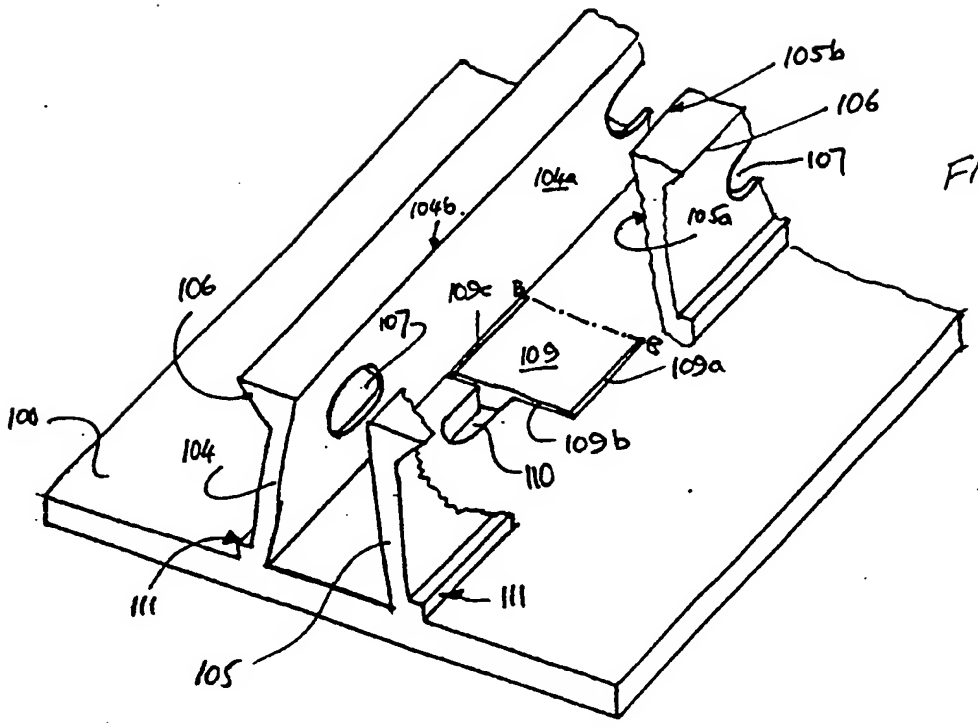

105b
106
107
104a
104b
105a
106
107
109c
B
109
109a
100
104
109b
110
111
111
105

FIG 7

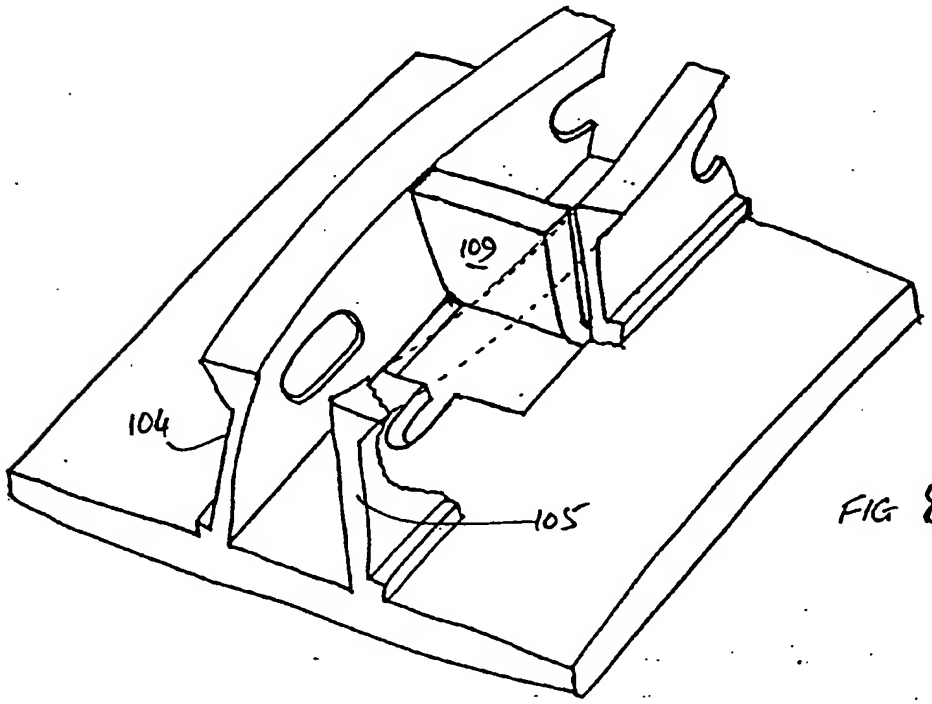

109
104
105

FIG 8